CLAIM LISTING

1. (Previously Presented) A communication receiver comprising:

an antenna for receiving an input signal from a transmitter which is moving relative to the receiver;

an A/D converter, connected to the antenna, for providing a sampled digital signal from the input signal; and

a controller for receiving and demodulating the sampled digital signal from the A/D converter, and the controller, prior to demodulation of the sampled digital signal, compensates for a Doppler increased frequency by decreasing a cycle of m samples by one sample period every n samples and compensates for a Doppler decreased frequency by increasing the cycle of m samples by one sample period every n samples, where m and n are integers.

2. (Currently Amended) The receiver according to Claim 1, wherein the controller compensates for ~~a~~ the Doppler increased frequency by skipping a sample period every n samples.

3. (Previously Presented) The receiver according to Claim 1, wherein the input signal has a cycle of m samples, and n is equal to or greater than m.

4. (Currently Amended) The receiver according to Claim 1, wherein the controller compensates for the ~~a~~ Doppler increased frequency by shifting the sampled digital signal forward one sample period every n samples.

5. Canceled

6. (Currently Amended) The receiver according to Claim 1, wherein the controller compensates for the ~~a~~ Doppler decreased frequency by adding a sample period every n samples.

7. Canceled

8. (Currently Amended) The receiver according to Claim 1, wherein the controller compensates for ~~a~~ the Doppler decreased frequency by repeating a sample every n samples.

9. Canceled

10. (Previously Presented) The receiver according to Claim 1, wherein the controller correlates and tracks a known transmission frequency of the transmitter to the frequency of the input signal.

11. (Previously Presented) The receiver according to Claim 10, wherein the controller matches the phase of the sampled digital signal to the known transmission frequency of the transmitter.

12. (Original) The receiver according to Claim 11, wherein the controller includes a phase locked loop for matching the phases.

13. (Original) The receiver according to Claim 12, wherein the controller includes software for shifting and demodulating the sampled digital signal and the phase locked loop.

14. (Original) The receiver according to Claim 1, wherein the controller includes software for shifting and demodulating the sampled digital signal.

15. (Original) The receiver according to Claim 1, wherein the controller integrates the demodulated sampled digital signals using a sine-cosine table.

16. (Original) The receiver according to Claim 15, wherein the controller correlates the integrated digital signal to stored PN sequences.

17. (Previously Presented) The receiver according to Claim 1, wherein the controller identifies how many transmitters' transmission are in the input signal and compensates and demodulates the sampled data for each identified transmitter, in parallel.

18. (Original) The receiver according to Claim 17, wherein the controller is a multi-threaded processor.

19. (Original) The receiver according to Claim 1, wherein the input signal is sampled at least eight times per cycle of the input signal.

20. (Previously Presented) A method of compensating for a Doppler change of frequency in a communication receiver comprising:

converting a received signal into a sampled digital signal;

determining the Doppler change of frequency from a known transmission frequency;

for a Doppler increased frequency, decreasing a cycle of m samples by one sample period every n samples and for a Doppler decreased frequency, increasing a cycle of m samples by one sample period every n samples, where m and n are integers; and

demodulating the compensated sampled digital signal.

21. (Currently Amended) The method according to Claim 20, wherein for ~~a~~ the Doppler increased frequency, skipping a sample period every n samples.

22. (Previously Presented) The method according to Claim 20, wherein the input signal has a cycle of m samples, and n is equal to or greater than m.

23. (Currently Amended) The method according to Claim 20, wherein for ~~a~~ the Doppler increased frequency, shifting the sampled digital signal forward one sample period every n samples.

24. Canceled

25. (Currently Amended) The method according to Claim 20, wherein for ~~a~~ the Doppler decreased frequency, adding a sample period every n samples.

26. Canceled.

27. (Currently Amended) The method according to Claim 20, wherein for ~~a~~ the Doppler decreased frequency, repeating a sample every n samples to shift the sampled digital signal.

28. Canceled.

29. (Original) The method according to Claim 20, including identifying how many transmitters' transmission are in the input signal and shifting and demodulating the sampled data for each identified transmitter, in parallel.

30. (Original) The method according to Claim 29, wherein the method is performed on a multi-threaded processor.

31. (Previously Presented) The method according to Claim 20, wherein the input signal is sampled at least eight times per cycle of the input signal.